IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Shingo Eguchi et al.
Serial No. : 09/925,486
Filed : August 10, 2001
Title : SEMICONDUCTOR DEVICE

Art Unit : 2826
Examiner : Ahmed N. Sefer

MAIL STOP AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REMARKS IN REPLY TO ACTION OF MARCH 1, 2004

Claims 1-27 are pending in this application with claims 1, 5, 9, 13, 18, and 23 being independent.

Applicants acknowledge with appreciation the Examiner's allowance of claims 9-27.

Independent claim 1 and dependent claims 2 and 3, which depend from claim 1, have been rejected as being anticipated by Ukai (U.S. Patent No. 5,521,729). Claim 1 recites a semiconductor device including a first electrode, an insulating film formed on the first electrode, a second electrode provided on the insulating film, a contact provided in the insulating film having a depth so as to reach the first electrode, and "a *gate wiring* which is formed on said insulating film and connected with said first electrode through said contact hole" (emphasis added). Applicants request reconsidaration and withdrawal of the rejection of claim 1 and dependent claims 2 and 3 because Ukai does not describe or suggest the recited gate wiring.

In Ukai, subpixel electrode 41, which the Examiner equates to the gate wiring, is not a gate wiring but rather is an electrode of a liquid crystal capacitor that is defined by the subpixel electrode 41, the liquid crystal 7, and the common electrode 6. See Fig.14A and 14B. Moreover, the subpixel electrode 41 does not function as a gate wiring, since it is not electrically connected to the gate of the thin film transistor (TFT) 8. Rather, it is electrically connected to the drain of the TFT 8. See Fig. 14B. Accordingly, Ukai does not describe or suggest the recited gate wiring, and, for at least this reason, applicants request reconsideration and withdrawal of the rejection of claims 1-3.

Independent claims 1 and 5 and dependent claims 2, 3, 6, and 7 have been rejected as being anticipated by Kawachi (U.S. Patent No. 6,559,906) and dependent claims 4 and 8, which depend from claims 1 and 5, respectively, have been rejected as being unpatentable over Kawachi. Claims 1 and 5 recite "a gate wiring which is formed on said insulating film and connected with said first electrode through said contact hole" and "a second electrode provided on said insulating film ... wherein said second electrode is provided so as to block an electric field by said first electrode to said liquid crystal layer." Applicants request reconsideration and withdrawal of the rejection of claims 1, 5, and their dependent claims, because Kawachi does not describe or suggest the recited second electrode.

In Kawachi, the second gate electrode 11, which the Examiner equates to the recited gate wiring and to a portion of the recited second electrode, is interconnected with the first gate electrode 10, which the Examiner equates to the recited first electrode. See col. 9, lines 5-9. This direct connection between the second gate electrode 11 (i.e., the second electrode) and the first gate electrode 10 (i.e., the first electrode), prevents the second gate electrode 11 from being "provided so as to block an electric field by said first electrode to said liquid crystal layer," as recited in claims 1 and 5. In particular, since the two gate electrodes are electrically connected, any electric field generated in the first gate electrode would also be generated in the second gate electrode, and accordingly, would not be backed from the liquid crystal. For at least this reason, Kawachi does not describe or suggest the recited second electrode being configured to block the electric field of the first electrode, and, therefore, the rejection of claims 1 and 5, and their dependent claims should be withdrawn.

Independent claim 1 has been rejected as being anticipated by Iizuka (U.S. Patent No. 6,515,720). Applicants request reconsideration and withdrawal of the rejection of claim 1 because Iizuka does not describe or suggest the recited gate wiring. In Iizuka, the third contact electrode 61C, which the Examiner equates to the recited gate wiring, is connected to the drain or source region of pixel thin film transistor 75. See Fig. 10. Accordingly, the third contact electrode 61C is not a *gate* wiring. For at least this reason, applicants request reconsideration and withdrawal of this rejection of claim 1.

Applicants submit that all claims are in condition for allowance.

Enclosed is a $110 check for the Petition for Extension of Time fee. Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,

Date: 6/30/04

Roberto J. Devoto
Reg. No. 55,108

Fish & Richardson P.C.
1425 K Street, N.W.
11th Floor
Washington, DC 20005-3500
Telephone: (202) 783-5070
Facsimile: (202) 783-2331

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